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REDISCOVERING W. D. GANN



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In this two-part series, we'll examine Gann's methodology. Throughout this examination, we'll cover the genesis of Gann's forecasting method, its early application by Gann, the potential problems with its practical application and their resolution, its evolution over time into the construction of annual forecasts, the problems arising from the greater complexity of annual forecasts and Gann's solutions to this complexity.

GANN'S DISCOVERY

Gann summarized the way in which he discovered his forecasting method as follows:

"A man may evolve a beautiful theory for making money in the stock market, and he may try it out on paper and find that it works. It is apparently successful, but when he applies it to actual trading and begins to buy and sell, he then finds the weak point and the theory fails in actual practice. I know whereof I speak, for I have tried dozens of different theories, put my money down and lost; exploded the theory, discarded it and started all over again.... The fact that my method of forecasting has stood the test of time is sufficient proof that I have solved the problem."

The Oxford English Dictionary defines scientific method as "A method of procedure that has characterized natural science since the 17th century, consisting in systematic observation, measurement and experiment, and the formulation, testing and modification of hypotheses." From this, we can infer that Gann discovered his method of forecasting the financial markets from his research based on the scientific method.

Gann stated that in August 1902 he started researching the financial markets and in August 1908, shortly after he moved to New York City, he "made one of his greatest mathematical discoveries for predicting the trend of stocks and commodities."

Gann initially observed that the prices of stocks and commodities appear to move in cycles. Through inductive reasoning, Gann then hypothesized that there is a set of immutable principles (which he called "natural law") underlying the complexity of stock and commodity prices. He then set out to discover these principles governing market prices:

"I soon began to note the periodical recurrence of the rise and fall in stocks and commodities. This led me to conclude that natural law was the basis of market movements. I then decided to devote 10 years of my life to the study of natural law as applicable to the speculative markets and to devote my best energies toward making speculation a profitable profession."

In addition to his early research carried out while an employee in a brokerage business (initially in Topeka and then in Oklahoma City), Gann spent nine months collecting and analyzing

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regular way, but I spent nine months working night and day in the Astor Library of New York and in the British Museum of London, going over the records of stock transactions as far back as 1820.”

Gann eventually discovered the natural law, or the set of immutable principles, governing stock and commodity prices. Gann called this natural law “the Law of Vibration.”

“After exhaustive researches and investigations of the known sciences, I discovered that the Law Of Vibration enabled me to accurately determine the exact points to which stocks or commodities should rise and fall within a given time.”

The evidence shows that by late 1909, Gann had fully discovered and tested his method of forecasting the financial markets, found it to be sound and was highly proficient in its practical application. For example, in December 1909 an interview with him was published that showed at that time Gann was skilled in forecasting and trading individual stocks, in forecasting the Dow Jones Industrial Average (which then included 12 stocks) and in forecasting and trading the two leading commodities (wheat and cotton).

GANN'S PRINCIPLES

Gann's method of forecasting the financial markets consisted of two elements: 1) cycles of time and 2) the rate of vibration.

Cycles, and their possible influence on human activities, have been speculated about since time immemorial. However, it appears that it was not until Gann carried out his research between 1902 and 1908 that the cause and effect of cycles on financial markets started to become understood (see “Gann time cycles,” below).

In addition to cycles of time, the so-called rate of vibration was a key element in Gann's method of forecasting the financial markets. He established the rate of vibration by measuring the slope of the trendline in prices for a particular financial instrument. Importantly, in his research between 1902 and 1908, Gann discovered similar principles operating in the financial markets to those being discovered contemporaneously in quantum physics.

For example, Gann discovered that the rate of vibration (as measured by the slope of the trendline) of stocks and commodities conforms to a series of principal energy levels and subshells. More specific, the principal energy levels equate to a doubling and halving of the rate of vibration and the subshells equate to a fourfold division of a principal energy level. Moreover, Gann discovered that these principal energy levels and subshells constitute important support and resistance points (see “Words of the master,” below).

analyzing the resulting rate of vibration (as measured by the slope of the trendline) to precisely forecast prices at a particular point in time. If the underlying cycles driving a particular stock or commodity have been identified, an investor can forecast precisely when those cycles will come to an end. Consequently, by knowing the date that the underlying cycles will end and by observing the rate of vibration (that is, the slope of the trend line in prices), one can make a precise forecast as to when and at what price the current uptrend (or downtrend) of the stock or commodity will end.

ILLUSTRATING EARLY METHODS

Here is an example of a forecast that Gann made in a 1909 interview with Richard Wyckoff:

“One of the most astonishing calculations made by Gann was during last summer (1909) when he predicted that September wheat would sell at \$1.20. This meant that it must touch that figure before the end of the month of September. At noon, Chicago time, on Sept. 30 (the last day), the option was selling below \$1.08, and it looked as though his prediction would not be fulfilled. Mr. Gann said ‘If it does not touch \$1.20 by the close of the market, it will prove that there is something wrong with my whole method of calculation. I do not care what the price is now, it must go there.’ It is common history that September wheat surprised the whole country by selling at \$1.20 and no higher in the very last hour of the trading, closing at that figure.”

First, Gann identified the start of the uptrend in the September 1909 Chicago wheat futures contract as a price of 94¢ per bushel on Jan. 26, 1909. In other words, Gann identified the set of positive (or constructive) cycles driving the uptrend in wheat and observed that these cycles started on Jan. 26, 1909 (see “Marking the uptrend,” below).

Gann then identified the long-term rate of vibration of this uptrend, which is 0.1053¢ per day (or 1¢ per 9.5 days). In completing this task, Gann had to correctly identify the position of the trendline (from the origin of 94¢ on Jan. 26, 1909) and then to measure the slope of this trendline. Gann would have received corroboration that he had identified the correct position of the trendline from two observations: That wheat prices received support on March 22, 1909, when the rate of vibration had halved, and that wheat prices met resistance on April 13, 1909, when the rate of vibration had doubled.

Gann then forecast that the set of positive cycles driving this uptrend would remain in force until at least the end of this futures contract (Sept. 30, 1909). Consequently, based on the starting point of 94¢ on Jan. 26, 1909, and a long-term rate of vibration of 0.1053¢ per day, Gann forecast that on Sept. 30, 1909, the price would be \$1.20.

cycles, Gann would have established that the short-term negative cycles operated simultaneously with the longer-term (but weaker) positive cycles driving the uptrend. And that the short-term negative cycles would start to expire from Aug. 26, 1909.

Gann would have received corroboration that this analysis was correct from observing that on Aug. 26, 1909, the price (of 96-¾) showed that the rate of vibration had fallen to precisely one-eighth of its long-term rate (that is, it had halved precisely three times) and the rate of vibration then started to increase. Thus, from Aug. 26, 1909, Gann forecast and observed the simultaneous expiration of the short-term negative cycles and the doubling three times of the rate of vibration, so that the long-term rate of vibration was regained on Sept. 30, 1909 (at a price of \$1.20).

In summary, this example clearly shows the two elements that constituted Gann's forecasting method: The cycles driving a particular stock or commodity and the resultant rate of vibration (as measured by the slope of the trendline).

PRACTICAL PROBLEMS

There were some known practical problems to implementing Gann's analysis methods at the time.

One was obtaining a detailed price history. Gann stated that the only potential problem in the practical application of his forecasting method is obtaining a sufficiently long and detailed price history of a particular financial instrument to identify the underlying cycles:

"In making my calculations on the stock market, or any future event, I get the past history and find out what cycle we are in and then predict the curve for the future, which is a repetition of past market movements.... The limit of future predictions based on exact mathematical law is only restricted by lack of knowledge of correct data on past history to work from."

Another potential problem in the practical application of Gann's method is the complexity of the underlying cycles. More specifically, from the above examination of Gann's September 1909 wheat forecast, we can conclude that an individual stock or commodity typically is governed by a number of positive (or constructive) cycles and negative (or destructive) cycles; and these multiple cycles act simultaneously and sequentially. Consequently, there are likely to be periods of time when it is difficult to identify which particular set of cycles is governing a stock or commodity. The solution to this problem, as Gann recommended, is always to trade in active stocks and commodities:

"Always confine your trading to standard, active stocks listed on the New York Stock Exchange. O English ve spurts, but the active leaders yield more profits in the long run." Also, "You

active, then they are probably being governed by a set of strongly positive cycles, and therefore the underlying cycles are likely to be more easily identified. Second, these active stocks or commodities are likely to offer significant profit potential. Conversely, the cycles governing inactive stocks or commodities are likely to be in balance, and therefore the underlying cycles may well be difficult to identify; and anyway, there is limited profit potential during these periods of inactivity.

Another potential problem in the practical application of Gann's method is cross-currents, which refers to a stock or commodity ceasing to act in harmony with its underlying cycles. Gann stated that cross-currents are typically more of a problem for stocks than for commodities:

"When you have a forecast made up for cotton or grain, if you are right, you are sure to make money because all options follow the same trend. There are no cross-currents, as in stocks, with some stocks declining to new low levels and others making new highs."

One cause of cross-currents in stocks, which Gann gives as an example, is dividends. More specifically, dividends suddenly can be declared or canceled and the resultant stock prices may cease moving in harmony with the underlying cycles. In fact, any major and sudden action by a company's management (for example, a sizable acquisition or divestment, or the issue of a material amount of new shares) may for a time produce cross-currents in the stock price. Gann's solution, once more, was to avoid such problematical stocks and to restrict trading to active stocks:

"The kind of stocks to trade in are those that are active and those that follow the rules and a definite trend. There are always queer-acting stocks and some stocks that don't follow the rules. These stocks should be left alone."

Here we looked at the genesis of Gann's techniques, how he applied them and discussed some factors that Gann viewed as problematic with respect to the application of his techniques. Next month, we'll look at how Gann's methodologies evolved into the construction of annual forecasts and some problems (and solutions) to that approach.

Note: The major source of the Gann quotes came from a 1909 article from *The Ticker And Investment Digest* titled, "William D. Gann; An Operator Whose Science And Ability Place Him In The Front Rank – His Remarkable Predictions And Trading Record."

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